

What is Claimed is:

- 1 1. A method of encoding a document to prevent undetected
2 alteration of the document comprises:
3 identifying symbols to be changed by applying font
4 changes to the identified symbols; and
5 generating font change pointers that track changes
6 applied to the identified symbols.
- 1 2. The method of claim 1 wherein identifying is variable
2 depending on how secure a user desires to make the document.
- 1 3. The method of claim 1 wherein the identified symbols to
2 apply changes to are randomly selected.
- 1 4. The method of claim 1 wherein the identified symbols to
2 apply changes to are selected by applying an algorithm to
3 select which of the characters in the document are changed.
- 1 5. The method of claim 1 wherein applying font changes
2 comprises:
3 substituting changed font symbols for the original
4 symbols in locations identified in the electronic file.
- 1 6. The method of claim 1 wherein font pointers are encrypted
2 and stored in a database that is maintained by the user or in
3 the electronic file.
- 1 7. The method of claim 1 wherein the font change pointers
2 that are automatically generated track the font changes.

1 8. The method of claim 1 wherein the document is encrypted
2 by pointer weighting that depends on the type of letter being
3 changed and how many times a particular letter is changed.

1 9. The method of claim 1 wherein applying font changes
2 comprises:

3 changing a font of a character slightly to the same
4 character in the same or to a similar font type.

1 10. The method of claim 1 wherein applying font changes
2 comprises:

3 changing font styles such that the changes are
4 discernable to a human.

1 11. The method of claim 1 wherein applying font changes
2 comprises:

3 changing font styles such that the changes are
4 imperceptible to a human.

1 12. The method of claim 1 wherein applying font changes
2 comprises:

3 changing a font centroid to displace the location of a
4 symbol from its original, expected location within a small
5 region that is defined for the symbol.

1 13. A method of decoding an electronic file that represents
2 an authenticated document when rendered to a human discernable
3 form, the method comprises:

4 obtaining font change pointer values that track font
5 changes applied to text in the electronic file;

6 retrieving font change pointers values store in an
7 author's database; and

8 comparing the obtained font change pointer values to the
9 retrieved font change pointers values stored in the author's
10 database to determine whether each of the pointer values
11 match.

1 14. The method of claim 13 wherein obtaining font change
2 pointers comprises:

3 generating font change pointer values from the file.

1 15. The method of claim 13 wherein obtaining font change
2 pointers comprises:

3 retrieving encrypted font change pointer values from the
4 file; and

5 decoding the retrieved font change pointer values.

1 16. A method of decoding an authenticated document, the
2 method comprises:

3 scanning the document;

4 applying optical character recognition to produce an
5 electronic file having recognized text and generated font
6 change pointer values that track font changes that were
7 applied to the text in the document;

8 retrieving font change pointers values stored in an
9 author's database; and

10 comparing the generated font change pointer values to the
11 retrieved font change pointers values stored in the author's
12 database to determine whether each of the pointer values
13 match.

1 17. A computer program product residing on a computer
2 readable medium for encoding a document to prevent undetected
3 alteration of the document comprises instructions for causing
4 a computer to:

5 apply font changes to identified symbols in a electronic
6 file representation of the document; and
7 generate font change pointers that track font changes
8 applied to the identified symbols.

1 18. The computer program product of claim 17 wherein
2 instructions to apply further comprise instructions to:
3 identify symbols using an algorithm that randomly selects
4 symbols to apply font changes.

1 19. The computer program product of claim 17 wherein
2 instructions to apply font changes further comprise
3 instructions to:
4 substitute modified font symbols for the original symbols
5 in locations identified in the electronic file.

1 20. The computer program product of claim 17 wherein
2 instructions to apply further comprise instructions to:
3 encrypt font pointers and store the encrypted font change
4 pointers in a database that is maintained by the user or in
5 the electronic file.

1 21. The computer program product of claim 17 wherein the font
2 change pointers that are automatically generated track the
3 font changes.

1 22. The computer program product of claim 17 wherein
2 instructions to apply further comprise instructions to:
3 change a font of a character slightly to the same
4 character in the same or to a similar font type.

1 23. The computer program product of claim 17 wherein
2 instructions to apply further comprise instructions to:

change font styles such that the changes are imperceptible to a human.

24. The computer program product of claim 17 wherein instructions to apply further comprise instructions to:

change a font centroid to displace the location of a symbol from its original, expected location within a small region that is defined for the symbol.

25. A computer program product residing on a computer readable medium for verifying authenticity of an electronic file that represents a document when rendered to a human discernable form, comprises instructions for causing a computer to:

obtain font change pointer values that track font changes applied to text in the electronic file;

retrieve font change pointer values stored in an author's database; and

compare the obtained font change pointer values to the retrieved font change pointers values stored in the author's database to determine whether each of the pointer values match.

26. The computer program product of claim 25 wherein instructions to obtain font change pointers comprises instructions to:

retrieve encrypted font change pointer values from the file; and

decode the retrieved font change pointer values.

27. A computer program product residing on a computer readable medium for decoding an authenticated document, comprises instructions for causing a computer to:

4 apply optical character recognition to a scanned
5 representation of the document to produce generated font
6 change pointer values that track font changes that were
7 applied to the text in the document;

8 retrieve font change pointer values stored in an author's
9 database; and

10 compare the generated font change pointer values to the
11 retrieved font change pointers values stored in the author's
12 database to determine whether each of the pointer values
13 match.

1 28. The computer program product of claim 27 wherein the
2 electronic file further includes recognized text.